FACT SHEET

FE, FL

Engine D7F240, EU5SCR-M

The D7F240 is an in-line six-cylinder diesel engine with a displacement of 7.2 litres, equipped with a turbocharger and Intercooler. The engine produces 240 hp and 940 Nm of torque. The engine meets the EU exhaust emissions requirements according to the Euro 5 standards.

The engine has a single cylinder head and a centrally located camshaft which operates four valves per cylinder via pushrods. The engine's functions are controlled electronically. Fuel injection takes place using common rail technology. In combination with SCR emission control, the engine emissions meets the Euro 5 standards.

There are two engine-braking systems to choose between – an exhaust brake on its own or an exhaust brake in combination with a powerful compression brake.

FEATURES AND BENEFITS

- Excellent driveability thanks to a wide torque range and swift response to the accelerator.
- Efficient combustion and exhaust filtration with SCR-technology contribute to low fuel consumption, long service intervals and very low emissions.

Excellent driveability

The engine has a particularly wide torque range, which means that it is possible to stay within the economy rev band easily and with minimal gear changing. The engine has excellent torque from low revs, which results in quick response to the accelerator and smooth driving.

One contributing factor to the excellent driveability is fuel injection using common rail technology. The fuel is injected through a single pipe under high pressure. Injection pressure and injection timing are controlled electronically, which results in precisely metered and exceptionally finely atomised fuel being sprayed into the combustion chamber. Control adjusts instantaneously to suit current operating conditions and the possibility of also injecting fuel after the main charge adds considerable flexibility.

Efficient combustion

Low emission ratings and low fuel consumption with the help of electronic engine control – EMS – make for precise fuel injection and efficient combustion.

The piston crowns feature a recess that forces the gases out towards the edges of the combustion chamber, thus contributing to efficient combustion. The shape of the inlet ducts in the cylinder head leads to slower rotation speed and lower pressure drop. This contributes to lower exhaust emissions and a higher efficiency rating.

Low noise level

The timing of the fuel injection is variable. This has a positive effect on the engine's noise level and emissions. Before the main injection charge, small amounts of fuel are injected, thus significantly reducing ignition delay and lowering the noise created during the main combustion sequence.

Exhaust emission control with SCR technology

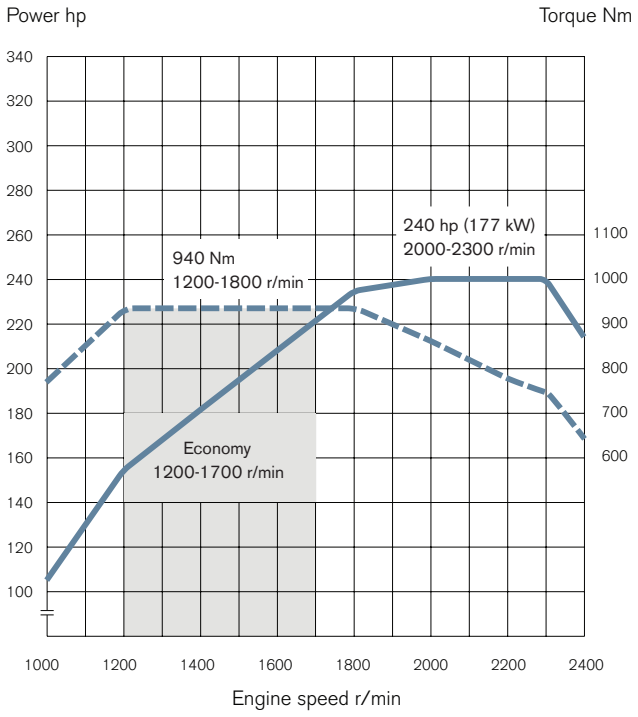
Volvo has chosen to supplement optimum combustion technology with SCR (Selective Catalytic Reduction) technology for after-treatment of the exhaust gases. In this process, an additive (AdBlue) is injected into the exhaust gases before they pass through an SCR catalytic converter. In the catalytic converter, the AdBlue reacts with the nitrogen oxides in a process that significantly reduces emissions. This takes place through conversion of the nitrogen oxides into nitrogen gas and water vapour.

The SCR technology is robust and dependable, resulting in low service costs and long service intervals.

Long service intervals

The cylinder block and cylinder head are made of cast-iron which gives a strong but light frame. The cylinder liners are of the wet, replaceable type. The plateau-honed inside of the linings improves lubrication of the cylinder bore, which in turn reduces wear on the piston rings and extends the engine's service life.

The oil-change interval varies with the way the truck is used, can be up to 100,000 km.



SPECIFICATION

Type designation	D7F240 EU5SCR-M
Max power at 2000-2300 r/min	240 hp (177 kW)
Max revs.	2500 r/min
Max torque at 1200 – 1800 r/min	940 Nm
No. of cylinders	6
Bore	108 mm
Stroke	130 mm
Displacement	7.2 dm^3
Compression ratio	18:1
Economy rev range	1200 – 1700 r/min
Exhaust brake output (EPG)	130 kW at 2800 r/min
Engine brake output (compression brake)	188 kW at 2800 r/min
Pre-catalyst	No
Oil-change volume incl. oil filter	27.5 litres
Cooling system, total volume	21.5 litres
Oil filter.	1 full-flow
Dry weight (base engine)	approx. 672 kg

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